

METHOD OF EFFICIENT DYNAMIC DATA CACHE PREFETCH INSERTION

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ABSTRACT OF THE DISCLOSURE

A system and method for dynamically inserting a data cache prefetch instruction into a program executable to optimize the program being executed. The method, and system thereof, monitors the execution of the program, samples on the cache miss events, identifies the time-consuming execution paths, and optimizes the program during runtime by inserting a prefetch instruction into a new optimized code to hide cache miss latency.